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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/531,888

04/20/2005

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EXAMINER

NOORISTANY, SULAIMAN

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/531,888	Applicant(s) IKEDA ET AL.	
	Examiner SULAIMAN NOORISTANY	Art Unit 2146	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,7 and 11-25 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,4,7 and 11-25 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/20/2005, 05/08/2008</u> . | 6) <input type="checkbox"/> Other: ____. |

Detailed Action

This Office Action is response to the application (10/531888) filed on 20 April 2005.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 7 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/18/08 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1,4, 7, 11-25 are rejected under 112, second paragraph as being indefinite for failing to particularly point and distinctly claim the subject matter which applicant regards as the invention

In claim 1, "*A router setting method*" in line 1 is not clear whether this intended to be the same as "*A method for a router setting*".

In claim 1, "*executing, by a first router device, a virtual router process for operating, virtually as one router device, a plurality of router devices connected to a local area network, in order to send information which is required for the virtual router process*" line 2-4, is not clear. The claim limitation is generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. However the claim will be given a broad reasonable interpretation for the purposes of examination as best understood.

In claim 7, "*the information is information required*" is indefinite and not clear what this is in reference to. The claim limitation is generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. However the claim will be given a broad reasonable interpretation for the purposes of examination as best understood.

Claim Rejections - 35 USC § 103

The text of those sections of the Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 4, 7, 11, 15-16, 18, 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jenson** U.S Patent App. No. **US 2002/0186653** in view of **Frelechoux** US **2002/0023163** further in view of **Stracke** U.S Patent No. **US 6,047,330**.

Regarding claims 1 & 7, Jenson teaches wherein a router device comprising:
a virtual router processing section for operating, virtually as one router device, a plurality of router devices connected to a local area network **(A VRRP router is configured to run the VRRP in conjunction with one or more other routers attached to a network, such as a local area network (LAN) -- Page. 1, [0009]; Fig. 1, unit --100);**

With respect to claims 1 & 7, Jenson teaches the invention set forth above except for the claimed “*a receiving section for receiving information sent from another router device, the information is information required for the virtual router process; and a virtual router information processing section for making a setting required for the virtual router process, on a basis of the information;*

wherein the router device is a mobile router device newly connected to the local area network.

the virtual router information processing section executes a process to request the information when the information processing section detects a connection to the

local area network, and

the other router device sends the information to the virtual router information processing section device based on the request.”

Frelechoux teaches that it is well known wherein a receiving section for receiving information sent from another router device, the information is information required for the virtual router process **(MR1 receives IP information – Page. 4, [0044])**; and

a virtual router information processing section for making a setting required for the virtual router process, on a basis of the information **(MR1 can than dynamically configure an OSPF interface with R2 – Page. 4, [0044])**;

wherein the router device is a mobile router device newly connected to the local area network **(when a connection to the fixed network (e.g. LAN) is established, mobile router MR1 can peer with the fixed network router – Page.4, [0044])**.

However, Frelechoux is silent in terms of “*the virtual router information processing section executes a process to request the information when the information processing section detects a connection to the local area network, and*

the other router device sends the information to the virtual router information processing section device based on the request.”

Stracke teaches that is well known to have the virtual router information processing section executes a process to request the information when the information processing section detects a connection to the local area network **(The Manage Router Topology task receives (detect) external heartbeat packets from the IP multicast**

task and checks the virtual network topology database for any new possible router connections – Col. 4, lines 51-54), and

the other router device sends the information to the virtual router information processing section device based on the request (**Fig. 3-5**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Jenson's invention by adding a mobile router (not fixed) which is represented a new connected router into the network. Also, Routers in the same broadcast domain or at each end of a point-to-point link form adjacencies when they have detected each other. This detection occurs when a router "sees" itself in a hello packet. This is called a two way state and is the most basic relationship. The routers elect a *designated router* (DR) and a *backup designated router* (BDR) which act as a hub to reduce traffic between routers. OSPF uses both unicast and multicast to send "hello packets" and link state updates as taught by Frelechoux.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Jenson's invention by referring to the heartbeat multicast packet which contains the TTL value in the header of the packet. The TTL value is also placed in the body of the packet. THE TTL value is decremented at each hop, but the receiving router knows what the TTL value is by reading the body of the packet. The originating router gets an estimate of how far away the receiving router is when it receives the response packet from the receiving router (i.e. the receiving router is less than TTL hops away from the originating router). The router uses the TTL values to find

the closest routers. It balances the efficiency of the network connections with the distance of the routers to create a balanced network topology. Connections are established with the routers that meet these criteria. Furthermore, the system relies on the IP multicast network. The IP network carries multicast packets. The address of the sender is contained in the multicast packet. If a router wants to talk to the sending router, it talks to that router through the established virtual network. If the virtual network does not exist, then it attempts to connect to the sending router anyway, as taught by Stracke.

Regarding claims 4, 20-23 Jenson, Frelechoux & Stracke together taught a router device in claims 1, 7 above. Jenson further teaches wherein the information includes a virtual router identifier, a virtual IP address and a virtual MAC address ((**virtual Internet Protocol (IP) address, Col. 1, [0009], medium access control (MAC) network address, Page. 1, [0010]**)).

Regarding claim 11, Jenson, Frelechoux & Stracke together taught a router device in claims 1, 7 above. Jenson further teaches wherein the virtual router information processing section, when receiving a request for the information, further executes a process to send the information being set as a response thereto to the router sending the request (**“The active network node may periodically send a control message to the standby (second node) network node. The control message may inform the standby (second node) network node that the active network node is active or in**

operation” -- Page. 1, [0010]).

Regarding claim 15, Jenson, Frelechoux & Stracke together taught a router device in claims 1, 7 above. Jenson further teaches wherein the information processing section sends the information at a regular interval **(The active network node may periodically send a control message to the standby network node -- Page. 1, [0010], The second network node may determine whether it receives control information from the first network node during a predetermined time interval at – Page. 3, [0023]).**

Frelechoux further teaches **“the switch logic could automatically supply the IP information to the router, e.g. at intervals or in response to an event such as a change in the PNNI topology or receipt of new PAR PTSEs from the network” – Page. 3, [0023]).**

Regarding claim 16 & 18, Jenson, Frelechoux & Stracke together taught a router device in claims 1, 7 above. Jenson further teaches wherein the information includes performance criteria indicating a level of data processing capability for the other router device to operate as a master router **(a network may carry information having a higher priority than other paths. The information may be important enough that technologies are required to make some paths redundant, that is, to ensure that if a node or link in the path goes down, that there is an alternate node or link, respectively, available to carry the information – [0008]).**

Regarding claims 24-25, Jenson, Frelechoux & Stracke together taught a router device in claims 1, 7 above. Stracke further teaches wherein the information includes a preference for the second router device to calculate its own priority (**Fig. 4-5**).

Claims 17, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jenson** U.S Patent App. No. **US 2002/0186653** in view of **Frelechoux** US Patent App. No. **2002/0023163** further in view of **Stracke** U.S Patent No. **US 6,956,816** further in of **Huo** U.S Patent No. **US 7,209,435**.

Regarding claim 17 & 19, Jenson, Frelechoux & Stracke together taught a router device in claims 1, 7 above. However, Jenson, Frelechoux & Stracke are silent in terms of *a priority of the second router device is calculated based on the performance capability of the first router device to operate as a master router*.

Huo teaches that is well known to utilize a priority of the second router device is calculated based on the performance capability of the first router device to operate as a master router (**Fig. 10**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Jenson's, Frelechoux's & Stracke's invention by calculating a priority value corresponding to the outgoing bandwidth available on each VSRP device comprising a virtual switch. In additional, the VSRP switch calculates that it has a higher priority than that contained in any analyzed hello packet, a hello packet is transmitted containing the VSRP switch's priority value and this portion of the parallel

process concludes until the next hello packet is received. If, however, the VSRP switch calculates that the received hello packet contains a greater priority value, the VSRP concludes that another device is the proper VSRP master for the virtual switch and therefore transitions into backup mode and sets its ports to blocking. The parallel process run by the software to maintain the timer mechanism is killed when the VSRP switch transitions to backup mode, as taught by Huo.

Response to Arguments

Applicant's arguments with respect to claims 1, 4, 7, 11, 15-25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sulaiman Nooristany whose telephone number is (571) 270-1929. The examiner can normally be reached on M-F from 9 to 5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Pwu, can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the

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PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sulaiman Nooristany 07/22/2008

/Joseph E. Avellino/

Primary Examiner, Art Unit 2146